



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,744	02/22/2002	Allan Wallace	24,577-18	8415
38824	7590	08/11/2005		
FULBRIGHT & JAWORSKI L.L.P. 80 SOUTH EIGHTH STREET SUITE 2100 MINNEAPOLIS, MN 55402			EXAMINER THOMPSON, JEWEL VERGIE	
			ART UNIT 2855	PAPER NUMBER

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/080,744

Applicant(s)

WALLACE, ALLAN

Examiner

Jewel V. Thompson

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-26 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **mask and hose** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Holstrom (4,428,242).

**Regarding claim 1**, Holstrom teaches a fluid flow sensing apparatus, comprising: a flow-responsive element (22) projecting into a fluid flow path (fig. 1 and col. 3, lines 34 and 35), the flow-responsive element generating a torque level in response to fluid flow col. 3, lines 39-col. 4, line 25); and a sensor (32) coupled to the flow-responsive element (fig. 1), the sensor able to determine fluid flow from the torque level in the flow-responsive element (col. 4, lines 61-65 and col. 3, lines 8-11)

**Regarding claim 2**, Holstrom teaches the apparatus has a sensitivity that is generally inversely related to a pressure generated by the fluid flow (col. 3, lines 38-41).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holstrom in view of Herzl (4,181,020).

**Regarding claim 3**, Holstrom fails to teach the flow-responsive element can change position in more than one direction. Herzl teaches the moving vortices on either side of the vane produce fluidic forces giving rise to alternate clockwise and counterclockwise torques (abstract). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the vane of Herzl in the apparatus of Holstrom for the purpose of being able to determine the flow of fluid even if there were a shift in direction of flow without having to replace the vane.

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holstrom in view of Federspiel (6,557,574)

**Regarding claim 4**, Holstrom fails to teach sensor is a position sensor. Federspiel teaches a position sensor (45). It would have been obvious to one of

Art Unit: 2855

ordinary skill in the art at the time that the invention was made to have used the position sensor of Federspiel in the apparatus of Holstrom for the purpose to provide the necessary information to calculate the flow rate of air/gas passing through the assembly (Federspiel, col. 4, lines 58-61) and precisely measures the orientation of the axle and hence the blade within the assembly (Federspiel, col. 6, lines 13-16).

**Regarding claim 5**, Holstrom fails to teach the sensor is in communication with a fluid flow controller. Federspiel teaches in col. 2, lines 63-65 the controller would typically include a signal from the blade position transducer indicative of the exact position of the blade. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the controller of Federspiel in the apparatus of Holstrom for the purpose of calculating the flow rate based on the pressure differential and the particular orientation of the blade (Federspiel, col. 3, lines 103)

5. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holstrom in view of Feller (6,681,645).

**Regarding claim 19**, Holstrom teaches a flow-responsive element projecting into a fluid flow path the flow-responsive element generating a torque level in response to fluid flow. Holstrom fails to teach a magnet coupled to the flow-responsive element and adapted to be displaced in response to the torque level generated by the flow-responsive element; and a sensor for detecting a change in position of the magnet. Feller et al teaches a magnet (34) coupled to the flow responsive element (18, fig. 2) and is adapted to be displaced in response to the torque level generated by the flow

Art Unit: 2855

responsive element and transducer (12). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the magnet, transducer and flow-responsive element of Feller and replaced it with the disc of Holstrom for the purpose of detecting the position of the magnet with respect to the location of the sensor so that the state of the sensor has a determination of the fluid flow rate.

**Regarding claim 20**, Holstrom teaches the apparatus has a sensitivity that is generally inversely related to a pressure generated by the fluid flow (col. 3, lines 38-41).

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Starr et al (6,3442,040) in view of Feller (6,681,645).

**Regarding claim 21**, Starr et al teaches a mask and the hose cooperating with the mask portion (col. 6, lines 10-33). Starr et al fails to teach a deformable element projecting into the air pathway; a magnet coupled to the deformable element; and a sensor adapted to detect a position change of the magnet. Feller teaches a deformable element (18) projecting into the air pathway (fig. 2); a magnet (38) coupled to the deformable element (col. 3, lines 27-28); and a sensor (12) adapted to detect a position change of the magnet (fig. 1). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have replaced the deformable element, magnet and sensor of Feller with the sensor in the apparatus of Starr et al for the purpose of determining the rate of flow of a fluid by sensing the force exerted by the fluid on a moveable element in the flow stream ( Feller, col. 1, lines 6-8).

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Starr et al in view of Feller as applied to claim 21 above, and further in view of Pyzik (5,182,952)

**Regarding claim 22**, Starr et al in view of Feller fails to teach a Hall effect sensor. Pyzik teaches a Hall effect sensor (48). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the Hall effect sensor of Pyzik in the apparatus of Starr et al for the purpose of cooperating with the paddlewheel as the wheel rotates in position to determine the flow of the fluid.

#### ***Allowable Subject Matter***

8. Claims 23-26 are allowed.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-5,19-22 have been considered but are moot in view of the new ground(s) of rejection.

**Applicants argue** that in light of the amendments, the cited references do not teach the claimed limitations.

**Examiner disagrees.** In light of the amended claims, the newly cited references do read on the claims. See Office Action

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6,212,958 Conley teaches a flow sensing assembly comprising measuring a fluid flow in response to deflection of the blade.

5,913,307 Taieb et al teaches a breathing protection equipment including a mask and hose

4,307,619 Herzl teaches a torsional paddle to measure the flow of fluid

Art Unit: 2855

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V. Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jvt  
August 4, 2005